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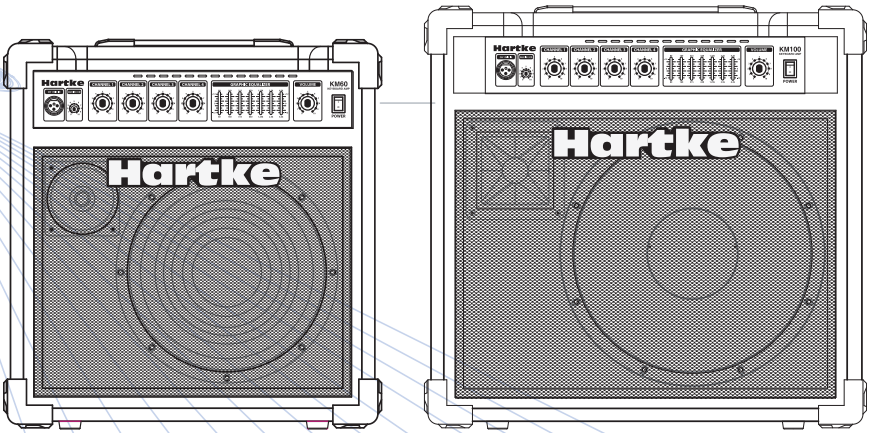
KM100
KM60



KEYBOARD MONITOR

Owners Manual

Hartke

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WARNING
DO NOT EXPOSE THIS EQUIPMENT
TO RAIN OR MOISTURE
AVIS
RISQUE DE CHOC ELECTRONIQUE
NE PAS OUVRIR

CAUTION
FOR CONTINUED PROTECTION AGAINST RISK
OF FIRE, REPLACE ONLY WITH SAME TYPE FUSE
ATTENTION
UTILISER UN FUSIBLE DE
RECHANGE DE MÊME TYPE

WARNING: To reduce the risk of fire or electric shock, do not expose this unit to rain or moisture. To reduce the hazard of electrical shock, do not remove cover or back. No user serviceable parts inside. Please refer all servicing to qualified personnel.The lightning flash with an arrowhead symbol within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the products enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons. The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Important Safety Instructions

1. Please read all instructions before operating the unit.
2. Keep these instructions for future reference.
3. Please heed all safety warnings.
4. Follow manufacturers instructions.
5. Do not use this unit near water or moisture.
6. Clean only with a damp cloth.
7. Do not block any of the ventilation openings. Install in accordance with the manufacturers instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.

9. Do not defeat the safety purpose of the polarized or grounding-type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or third prong is provided for your safety. When the provided plug does not fit your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on and pinched particularly at plugs, convenience receptacles and at the point at which they exit from the unit.
11. Unplug this unit during lightning storms or when unused for long periods of time.
12. Refer all servicing to qualified personnel. Servicing is required when the unit has been damaged in any way, such as power supply cord or plug damage, or if liquid has been spilled or objects have fallen into the unit, the unit has been exposed to rain or moisture, does not operate normally, or has been dropped.

ATTENTION: Pour éviter tout risque d'électrocution ou d'incendie, ne pas exposer cet appareil à la pluie ou à l'humidité. Pour éviter tout risque d'électrocution, ne pas ôter le couvercle ou le dos du boîtier. Cet appareil ne contient aucune pièce remplaçable par l'utilisateur. Confiez toutes les réparations à un personnel qualifié. Le signe avec un éclair dans un triangle prévient l'utilisateur de la présence d'une tension dangereuse et non isolée dans l'appareil. Cette tension constitue un risque d'électrocution. Le signe avec un point d'exclamation dans un triangle prévient l'utilisateur d'instructions importantes relatives à l'utilisation et à la maintenance du produit.

Consignes de sécurité importantes

1. Veuillez lire toutes les instructions avant d'utiliser l'appareil.
2. Conserver ces instructions pour toute lecture ultérieure.
3. Lisez avec attention toutes les consignes de sécurité.
4. Suivez les instructions du fabricant.
5. Ne pas utiliser cet appareil près d'une source liquide ou dans un lieu humide.
6. Nettoyez l'appareil uniquement avec un tissu humide.
7. Veillez à ne pas obstruer les fentes prévues pour la ventilation de l'appareil. Installez l'appareil selon les instructions du fabricant.
8. Ne pas installer près d'une source de chaleur (radiateurs, etc.) ou de tout équipement susceptible de générer de la chaleur (amplificateurs de puissance par exemple).
9. Ne pas retirer la terre du cordon secteur ou de la prise murale. Les fiches canadiennes avec polarisation (avec une lame plus large) ne doivent pas être modifiées. Si votre prise murale ne correspond pas au modèle fourni, consultez votre électricien.
10. Protégez le cordon secteur contre tous les dommages possibles (pincement, tension, torsion,, etc.). Veillez à ce que le cordon secteur soit libre, en particulier à sa sortie du boîtier.
11. Déconnectez l'appareil du secteur en présence d'orage ou lors de périodes d'inutilisation prolongées.
12. Consultez un service de réparation qualifié pour tout dysfonctionnement (dommage sur le cordon secteur, baisse de performances, exposition à la pluie, projection liquide dans l'appareil, introduction d'un objet dans le boîtier, etc.).

ACHTUNG: Um die Gefahr eines Brandes oder Stromschlags zu verringern, sollten Sie dieses Gerät weder Regen noch Feuchtigkeit aussetzen.Um die Gefahr eines Stromschlags zu verringern, sollten Sie weder Deckel noch Rückwand des Geräts entfernen. Im Innern befinden sich keine Teile, die vom Anwender gewartet werden können. Überlassen Sie die Wartung qualifiziertem Fachpersonal.Der Blitz mit Pfeilspitze im gleichseitigen Dreieck soll den Anwender vor nichtisolierter "gefährlicher Spannung" im Geräteinnern warnen. Diese Spannung kann so hoch sein, dass die Gefahr eines Stromschlags besteht. Das Ausrufezeichen im gleichseitigen Dreieck soll den Anwender auf wichtige Bedienungs- und Wartungsanleitungen aufmerksam machen, die im mitgelieferten Informationsmaterial näher beschrieben werden.

Wichtige Sicherheitsvorkehrungen

1. Lesen Sie alle Anleitungen, bevor Sie das Gerät in Betrieb nehmen.
2. Bewahren Sie diese Anleitungen für den späteren Gebrauch gut auf.
3. Bitte treffen Sie alle beschriebenen Sicherheitsvorkehrungen.
4. Befolgen Sie die Anleitungen des Herstellers.
5. Benutzen Sie das Gerät nicht in der Nähe von Wasser oder Feuchtigkeit.
6. Verwenden Sie zur Reinigung des Geräts nur ein feuchtes Tuch.
7. Blockieren Sie keine Belüftungsöffnungen. Nehmen Sie den Einbau des Geräts nur entsprechend den Anweisungen des Herstellers vor.
8. Bauen Sie das Gerät nicht in der Nähe von Wärmequellen wie Heizkörpern, Wärmeklappen, Öfen oder anderen Geräten (inklusive Verstärkern) ein, die Hitze erzeugen.
9. Setzen Sie die Sicherheitsfunktion des polarisierten oder geerdeten Steckers nicht außer Kraft. Ein polarisierter Stecker hat zwei flache, unterschiedlich breite Pole. Ein geerdeter Stecker hat zwei flache Pole und einen dritten Erdungsstift. Der breitere Pol oder der dritte Stift dient Ihrer Sicherheit. Wenn der vorhandene Stecker nicht in Ihre Steckdose passt, lassen Sie die veraltete Steckdose von einem Elektriker ersetzen.
10. Schützen Sie das Netzkabel dahingehend, dass niemand darüber laufen und es nicht geknickt werden kann. Achten Sie hierbei besonders auf Netzstecker, Mehrfachsteckdosen und den Kabelanschluss am Gerät.
11. Ziehen Sie den Netzstecker des Geräts bei Gewittern oder längeren Betriebspausen aus der Steckdose.
12. Überlassen Sie die Wartung qualifiziertem Fachpersonal. Eine Wartung ist notwendig, wenn das Gerät auf irgendeine Weise, beispielsweise am Kabel oder Netzstecker beschädigt wurde, oder wenn Flüssigkeiten oder Objekte in das Gerät gelangt sind, es Regen oder Feuchtigkeit ausgesetzt war, nicht mehr wie gewohnt betrieben werden kann oder fallen gelassen wurde.

PRECAUCION: Para reducir el riesgo de incendios o descargas, no permita que este aparato quede expuesto a la lluvia o la humedad. Para reducir el riesgo de descarga eléctrica, nunca quite la tapa ni el chasis. Dentro del aparato no hay piezas susceptibles de ser reparadas por el usuario. Dirija cualquier reparación al servicio técnico oficial. El símbolo del relámpago dentro del triángulo equilátero pretende advertir al usuario de la presencia de "voltajes peligrosos" no aislados dentro de la carcasa del producto, que pueden ser de la magnitud suficiente como para constituir un riesgo de descarga eléctrica a las personas. El símbolo de exclamación dentro del triángulo equilátero quiere advertirle de la existencia de importantes instrucciones de manejo y mantenimiento (reparaciones) en los documentos que se adjuntan con este aparato.

Instrucciones importantes de seguridad

1. Lea todo este manual de instrucciones antes de comenzar a usar la unidad.
2. Conserve estas instrucciones para cualquier consulta en el futuro.
3. Cumpla con todo lo indicado en las precauciones de seguridad.
4. Observe y siga todas las instrucciones del fabricante.
5. Nunca utilice este aparato cerca del agua o en lugares húmedos.
6. Limpie este aparato solo con un trapo suave y ligeramente humedecido.
7. No bloquee ninguna de las aberturas de ventilación. Instale este aparato de acuerdo a las instrucciones del fabricante.
8. No instale este aparato cerca de fuentes de calor como radiadores, calentadores, hornos u otros aparatos (incluyendo amplificadores) que produzcan calor.
9. No anule el sistema de seguridad del enchufe de tipo polarizado o con toma de tierra. Un enchufe polarizado tiene dos bornes, uno más ancho que el otro. Uno con toma de tierra tiene dos bornes normales y un tercero para la conexión a tierra. El borne ancho o el tercero se incluyen como medida de seguridad. Cuando el enchufe no encaje en su salida de corriente, llame a un electricista para que le cambie su salida anticuada.
10. Evite que el cable de corriente quede en una posición en la que pueda ser pisado o aplastado, especialmente en los enchufes, receptáculos y en el punto en el que salen de la unidad.
11. Desconecte de la corriente este aparato durante las tormentas eléctricas o cuando no lo vaya a usar durante un periodo de tiempo largo.
12. Dirija cualquier posible reparación solo al servicio técnico oficial. Deberá hacer que su aparato sea reparado cuando esté dañado de alguna forma, como si el cable de corriente o el enchufe están dañados, o si se han derramado líquidos o se ha introducido algún objeto dentro de la unidad, si esta ha quedado expuesta a la lluvia o la humedad, si no funciona normalmente o si ha caído al suelo.

ATTENZIONE: per ridurre il rischio di incendio o di scariche elettriche, non esponete questo apparecchio a pioggia o umidità. Per ridurre il pericolo di scariche elettriche evitate di rimuoverne il coperchio o il pannello posteriore. Non esistono all'interno dell'apparecchio parti la cui regolazione è a cura dell'utente. Per eventuale assistenza, fate riferimento esclusivamente a personale qualificato. Il fulmine con la punta a freccia all'interno di un triangolo equilatero avvisa l'utente della presenza di "tensioni pericolose" non isolate all'interno dell'apparecchio, tali da costituire un possibile rischio di scariche elettriche dannose per le persone. Il punto esclamativo all'interno di un triangolo equilatero avvisa l'utente della presenza di importanti istruzioni di manutenzione (assistenza) nella documentazione che accompagna il prodotto.

Importanti Istruzioni di Sicurezza

1. Prima di usare l'apparecchio, vi preghiamo di leggerne per intero le istruzioni.
2. Conservate tali istruzioni per una eventuale consultazione futura.
3. Vi preghiamo di rispettare tutte le istruzioni di sicurezza.
4. Seguite tutte le istruzioni del costruttore.
5. Non usate questo apparecchio vicino ad acqua o umidità.
6. Pulite l'apparecchio esclusivamente con un panno asciutto.
7. Evitate di ostruire una qualsiasi delle aperture di ventilazione. Posizionatelo seguendo le istruzioni del costruttore.
8. Non posizionatelo vicino a sorgenti di calore come radiatori, scambiatori di calore, forni o altri apparecchi (amplificatori compresi) in grado di generare calore.
9. Non disattivate la protezione di sicurezza costituita dalla spina polarizzata o dotata di collegamento a terra. Una spina polarizzata è dotata di due spinotti, uno più piccolo ed uno più grande. Una spina dotata di collegamento a terra è dotata di due spinotti più un terzo spinotto di collegamento a terra. Questo terzo spinotto, eventualmente anche più grande, viene fornito per la vostra sicurezza. Se la spina fornita in dotazione non si adatta alla vostra presa, consultate un elettricista per la sostituzione della presa obsoleta.
10. Proteggete il cavo di alimentazione in modo che non sia possibile camminarci sopra né piegarlo, con particolare attenzione alle prese, ai punti di collegamento e al punto in cui esce dall'apparecchio.
11. Staccate l'apparecchio dalla alimentazione in caso di temporali o tempeste o se non lo usate per un lungo periodo.
12. Per l'assistenza, fate riferimento esclusivamente a personale qualificato. È necessaria l'assistenza se l'apparecchio ha subito un qualsiasi tipo di danno, come danni al cavo o alla spina di alimentazione, nel caso in cui sia stato versato del liquido o siano caduti oggetti al suo interno, sia stato esposto a pioggia o umidità, non funzioni correttamente o sia stato fatto cadere.

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Introduction

Congratulations on purchasing the Hartke KM60 or KM100 Keyboard Amplifier! The KM60 and KM100 are perfect solutions for just about any keyboard player who needs a flexible mix /monitor system to handle a sophisticated instrument rig, and who demands a high quality amplifier that faithfully reproduces the sound, nuances, and soul, of their performance. The KM60 achieves this goal by delivering a solid 60 watts of power, driving a custom designed Hartke 10" aluminum cone low frequency drive unit, working with a ceramic tweeter, fit in a rugged enclosure. The KM100 handles the job by delivering 100 watts of power, driving a custom designed Hartke 12" aluminum cone low frequency drive unit, working with a 1" titanium compression driver, enclosed in an innovative kickback cabinet, giving you a powerful full-range 2-way professional monitoring system.

For players with multiple keyboards and sound modules, an additional mixer isn't needed because the KM60 and KM100 have one built-in. The mixer features a Mic/Line input, as well as three additional inputs, giving you a total of 4 channels, plus a stereo Aux in. The KM60 and KM100 also feature a powerful 7-band Graphic Equalizer allowing you to set a customized frequency response contour that's perfect for your sound and helps you hear yourself better on stage. The KM60 and KM100 are easy to transport and the solid construction makes them reliable performers from night-to-night and venue-to-venue.

Although these units are designed for easy operation, we suggest you first take some time to go through these pages so you can fully understand how we've implemented a number of unique features. In these pages, you'll find a detailed description of the many features of the KM60 and KM100 keyboard amplifiers, as well as a guided tour through it's front and rear panels, step-by-step instructions for setting up and using the product, detailed discussions about equalization and compression, and full specifications. You'll also find a warranty card enclosed—please don't forget to fill it out and mail it so that you can receive online technical support and so we can send you updated information about these and other Hartke and Samson products in the future.

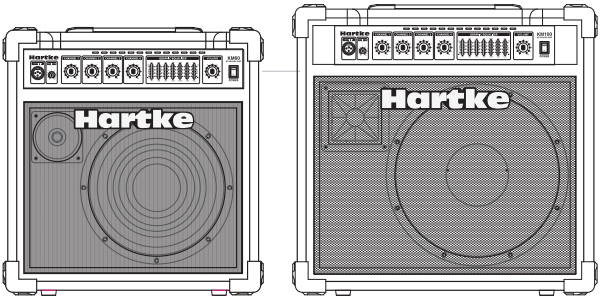
With proper care and adequate air circulation, your KM60 or KM100 will operate trouble free for many years. We recommend you record your serial number in the space provided below for future reference.

Serial number: _____

Date of purchase: _____

Should your unit ever require servicing, a Return Authorization number (RA) must be obtained before shipping your unit to Samson. Without this number, the unit will not be accepted. Please call Samson at 1-800-3SAMSON (1-800-372-6766) for a Return Authorization number prior to shipping your unit. Please retain the original packing materials and if possible, return the unit in the original carton and packing materials.

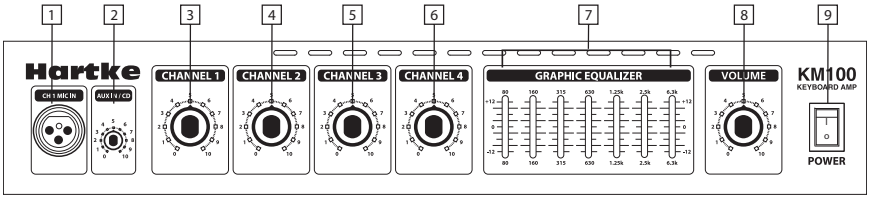
Hartke KM60 and KM100 Keyboard Amplifier Features



The Hartke KM60 and KM100 keyboard amplifiers offer all the newest concepts in Keyboard amplification. Here are some of their main features:

- Four Channel Keyboard mixer amplifier with 2-way speaker system.
- Microphone input, plus 3 additional mono input channels.
- The KM60 features 60 Watts of clean Hartke power while the KM100 provides 100 Watts, delivered to thier 2-way internal speaker system.
- For rocking lows, the KM60 employs a 10-inch, custom designed Hartke Aluminum Cone Low Frequency Drive Unit and the KM100 emlpoys a 12-inch, custom designed Hartke Aluminum Cone Low Frequency Drive Unit.
- To capture and project the high frequencies of your keyboard rig, the the KM60 utilizes a ceramic tweeter, and the KM100, a 1-inch Throat Titanium Compression Driver.
- A 7-band Graphic Equalizer is provided to shape the overall tone of the keyboard monitor.
- The KM100 features an innovative Kickback enclosure design that allows the sound to be projected up at the player.
- Rugged construction makes the KM60 and KM100 eminently road-worthy.
- Three year extended warranty.

Guided Tour - Front Panel



1. **Channel 1 MIC IN** - XLR input connector for connecting to Channel 1's Low-noise Microphone Pre-amp.

2. **AUX IN/CD -** Your KM Series amplifier features a CD input which you can use with a portable CD player, cassette, mini disk or MP3 player. You can use the CD input to jam with pre-recorded tracks or to learn a riff from a favorite recording.

3. **Channel 1 Volume** - Control knob is used to control the overall level of the Channel 1 input.

4. **Channel 2 Volume** – This control knob used to control the overall level of the Channel 2 input.

5. **Channel 3 Volume** - Control knob is used to control the overall level of the Channel 3 input.

6. **Channel 4 Volume** – This control knob is used to control the overall level of the Channel 4 input.

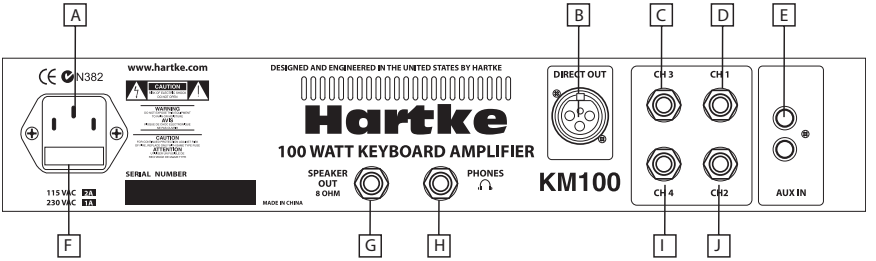
7. **Graphic Equalizer** - These sliders allow you to "draw" the tonal response of the system by adding 12 dB of boost or attenuation to seven different narrow-band frequency areas (100 Hz, 250 Hz, 500 Hz, 1 kHz, 2.5 kHz, 5 kHz, and 10 kHz), affecting the main output signal of the KM100. When a slider is at its center detented ("0") position, the selected frequency area is unaffected (it is said to be flat). When a slider is moved up (above the "0" position, towards the "+12" position), the selected frequency area is boosted, and when it is moved down (below the "0" position, towards the "-12" position), the selected frequency area is attenuated. For more information, see the "About Equalization" section on pages 9 - 10 of this manual.

8. **Volume** - Control knob used to control the overall level the KM60 or KM100 amplifier.

9. **Power switch** - Use this to power the KM60 or KM100 on or off.

ENGLISH

Guided Tour - Rear Panel



A. AC INLET - Connect the supplied standard IEC power cable here.

B. Direct Output XLR - This connector carries the Balanced signal from the KM60 or 100's mixer output and can be used to connect to the main PA mixer.

C. Channel 3 Input - 1/4-inch phone jack for connecting line level inputs. Use this input if you are connecting a mono signal source.

D. Channel 1 Input - 1/4-inch phone jack for connecting line level inputs like those from keyboards and drum machines.

E. Aux Input – RCA inputs for connecting an external line level signal like that from a CD, MP3 player or sound card.

F. FUSE - User accessible fuse.

G. PHONES - Connect any stereo headphone (600 ohms or less) to this standard 1/4" stereo jack. When a plug is inserted into the headphone jack, the speaker output is disconnected, allowing you to use your KM60 or KM100 as a practice amplifier. The level of the signal sent to the headphones is determined by the setting of the Output knob—at the point where a connected speaker would clip, the headphones will clip.

WARNING: *Because even the smallest KM Series amplifier is capable of generating extremely high headphone signal levels, always start with the Volume knob at minimum and then slowly turn it up. In particular, a clicking sound is an indication of distortion and possible damage to the headphones (and/or your hearing!); don't let things get to that point!*

H. Speaker Output - 1/4-inch phone jack for connecting the internal speaker (KM100 only).

I. Channel 4 Input - 1/4-inch phone jack for connecting line level inputs like those from keyboards and drum machines.

J. Channel 2 Input - 1/4-inch phone jack for connecting line level inputs like those from keyboards and drum machines.

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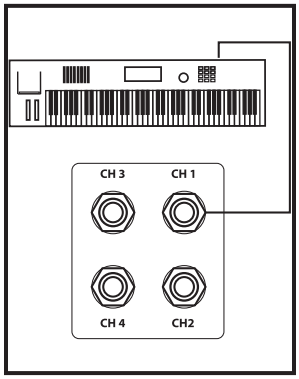
Setting Up and Using Your Hartke KM60 and KM100 Keyboard Amplifier

KM200 Basic Operation

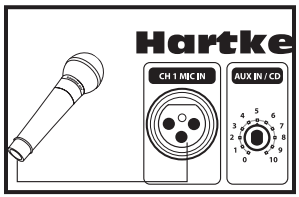


Setting up your Hartke KM60 or Km100 Keyboard amplifier is a simple procedure which takes only a few minutes:

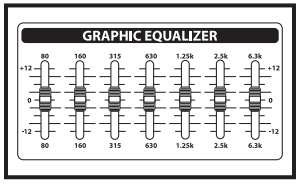
1. Remove all packing materials (save them in case of need for future service) and decide where the amplifier is to be physically placed. To avoid potential overheating problems, be sure that the rear panel is unobstructed and that there is good ventilation around the entire unit.

2. Connect the 3-pin AC plug into any grounded AC socket. Don't turn the amplifier on just yet, though.

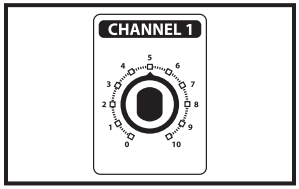
3. Use standard music instrument cables to connect your keyboards and/or drum machines to the appropriate Input jack, or jacks, on the rear panel. If you want to connect a microphone, connect a low impedance mic to the Channel 1 XLR mic input located on the front panel.



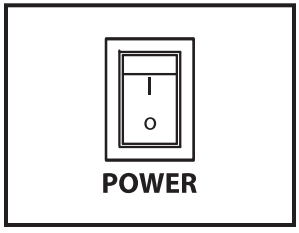
WARNING: Hartke amplifiers can deliver very high power levels. Driven to full power, they can damage connected loudspeakers, regardless of brand, size, or configuration. Care should be taken not to strain connected loudspeakers as this can cause permanent damage and will degrade the performance of the entire system. If you see connected loudspeakers moving excessively, turn your system down immediately or use the equalization and/or compression controls to reduce the amount of sub harmonic (extremely low frequency) signal.



4. Set the main Volume control to "0" (fully counterclockwise and set channel volume knobs to "5" (the twelve o'clock position). Then, set the graphic equalizer sliders to the middle 0dB position.

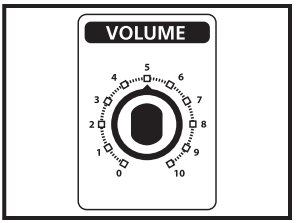


5. Press the front panel Power switch in order to turn on the amplifier.



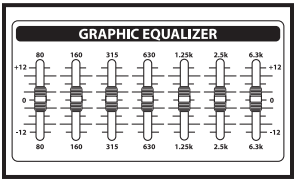
Setting Up and Using Your Hartke KM60 and KM100 Keyboard Amplifier

6. Set the output of your keyboard to about 3/4's the way up and then, while playing, slowly turn the main Volume control up until the desired level is achieved. If you hear distortion even at low amplifier Master volume settings, back off the output of your Keyboard (or check for a faulty cable).

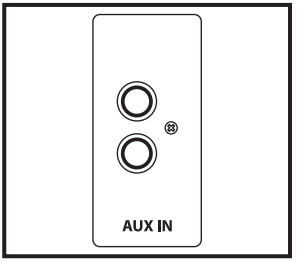


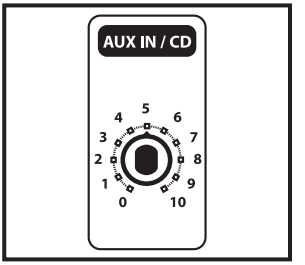
7. Next, experiment with the KM60 or KM100's graphic equalizer. Begin by setting each of the seven sliders to their flat "0" center detented position. Finally, move each slider in turn as you play your Keyboard. For more information, see the "About Equalization" section on pages 8-9 of this manual. Again, when you get a graphic equalization setting that complements your instrument and playing style, it's a good idea to write it down for future use.

If you have followed all the steps above and are still experiencing difficulties, call Samson Technical Support (516-932-1062) between 9 AM and 5 PM EST.



8. Your KM series amplifier features a AUX/CD input which you can use with a portable CD player, cassette, mini disk or MP3 player to jam with pre-recorded tracks or learn a riff from a favorite tune. In fact, you can plug any line level signal into the AUX input including the signal from a keyboard or drum machine. Connect the CD player or other Line level device to the AUX Input using standard RCA cable. You will want to use the volume control on the CD player or other Line level device to set the balance between the track and your keyboard. So, start with the volume control all the way down and slowly raise it until you reach a good balance with your keyboard



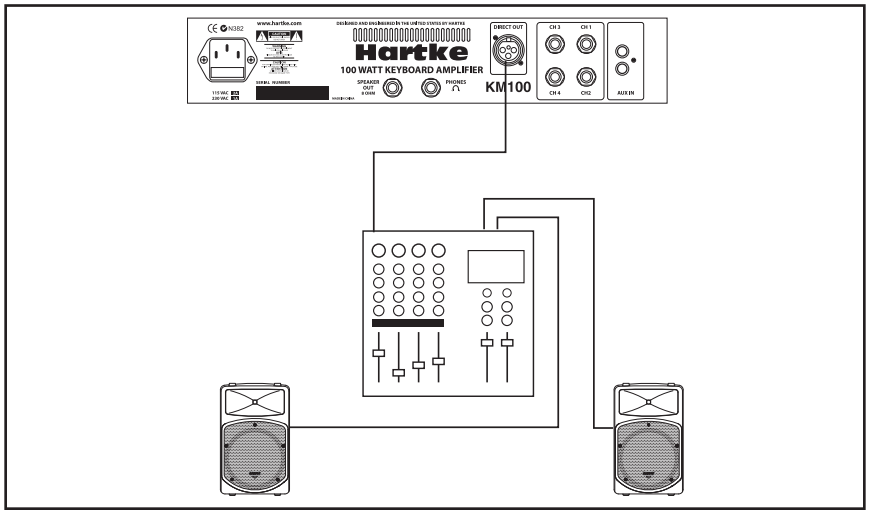


9. Test the headphone output by turning the Volume control to its minimum (fully counterclockwise) position and then connect a standard stereo headphone to the rear panel Phones jack. While playing your keyboard, *slowly* turn the Volume control up—you should hear sound from the headphones and none from the connected speaker.

Using the KM60 and KM100's Set-ups

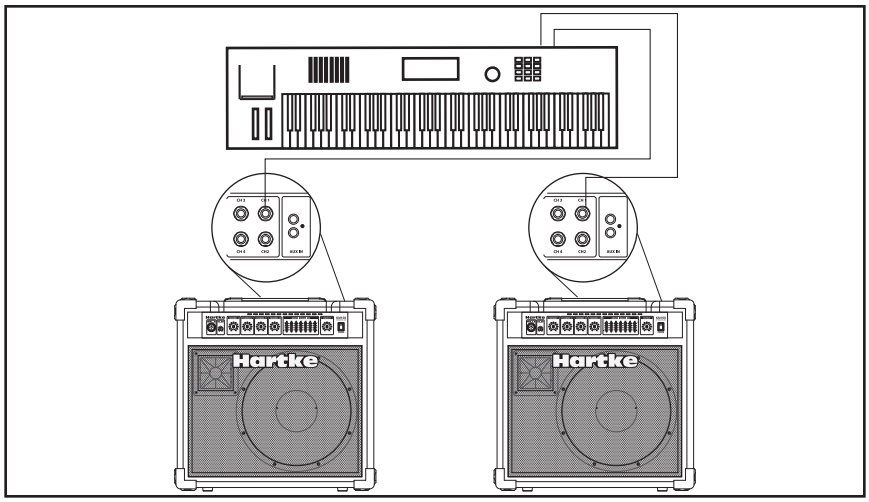
Using the Direct Output

The KM 60 and KM100 feature a Direct Out jack for connencting to the main PA systems. Use this electronically balanced XLR jack to route signal from the KM60 or KM100 to a professional mixing console or as a tap to a main PA system via a mic input on the console. The signal output from this jack is low impedance (100 ohm) with an output level of approximately -30 to -20 dB. You can also use the Direct Out jack to route signal to an external amplifier with a -10 dB input sensitivity.

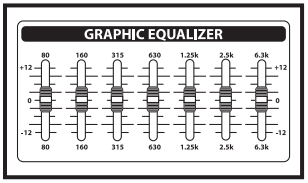


KM60 or KM100 Stereo Set-up

You can use two KM60's or KM100's for stereo operation by simply connecting the left output of your keyboard to one KM60 or KM100 and the right output of your keyboard to the second KM60 or KM100. You can repeat this set-up for up to four stereo keyboards or drum machines using channel 1 - 4 on each KM series amplifier.



About Equalization



The Hartke KM60 or KM100 Keyboard amplifier gives you enormous control over shaping the sound of your keyboard rig, using a process called equalization. To understand how this works, it's important to know that every naturally occurring sound consists of a broad range of pitches, or frequencies, combined together in a unique way. This blend is what gives every sound its distinctive tonal color. EQ controls allow you to alter a sound by boosting or attenuating specific frequency areas—they operate much like the bass and treble controls on your hi-fi amp, but with much greater precision. The KM60 or KM100 provides you with one most effective tool for shaping the overall tone of your Keyboard sound; a Graphic Equalizer providing 12 dB of cut or boost in seven narrow frequency bands.

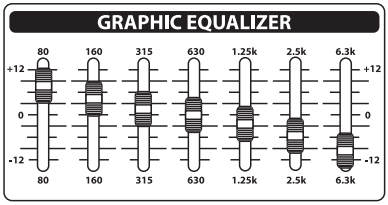
The seven-band graphic equalizer provides seven sliders, each corresponding to a single narrow frequency band (100 Hz, 250 Hz, 500 Hz, 1 kHz, 2.5 kHz, 5 kHz, and 10 kHz). This allows you to "draw" the desired tonal response of your system. When a slider is in its center position ("0"), it is having no effect. When it is moved above center (towards "+12"), the particular frequency area is being boosted; when it is moved below center (towards "-12"), the frequency area is being attenuated. We carefully selected these frequency areas because they have maximum impact on keyboard signals. For example, the lowest slider (100 Hz) affects the very lowest audible frequencies (in fact, most humans cannot hear below 20 Hz), while the highest four sliders affects the mid-range and high frequencies.

To find out how each graphic equalizer slider affects the sound of your particular keyboard, start with all seven bands flat (that is, all seven sliders at their "0" center position).

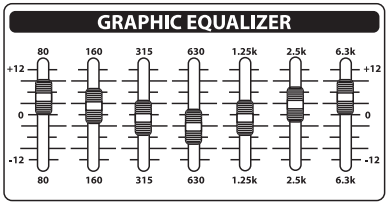
About Equalization

Then, one by one, raise and lower each slider, listening carefully to the effect of each. Note that turning all EQ controls up the same amount will have virtually the same effect as simply turning up the main Volume; conversely, turning them all down the same amount will have virtually the same effect as turning down the main Volume. Both approaches are pointless (after all, that's why we gave you a main Volume control!)

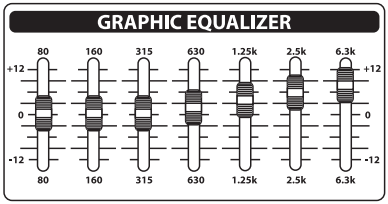
In many instances, the best way to deal with equalization is to think in terms of which frequency areas you need to attenuate, as opposed to which ones you need to boost. Be aware that boosting a frequency area also has the effect of boosting the overall signal; specifically, too much low frequency EQ boost can actually cause overload distortion or even harm a connected speaker.



The specific EQ you will apply to your Keyboard signal is very much dependent upon your particular instrument and personal taste and playing style. However, here are a few general suggestions:



- For that super-deep reggae or techno bass sound, boost low frequencies slightly while attenuating the highest ones (leave mid-range frequencies flat or slightly attenuated), as shown in the illustration on the right.



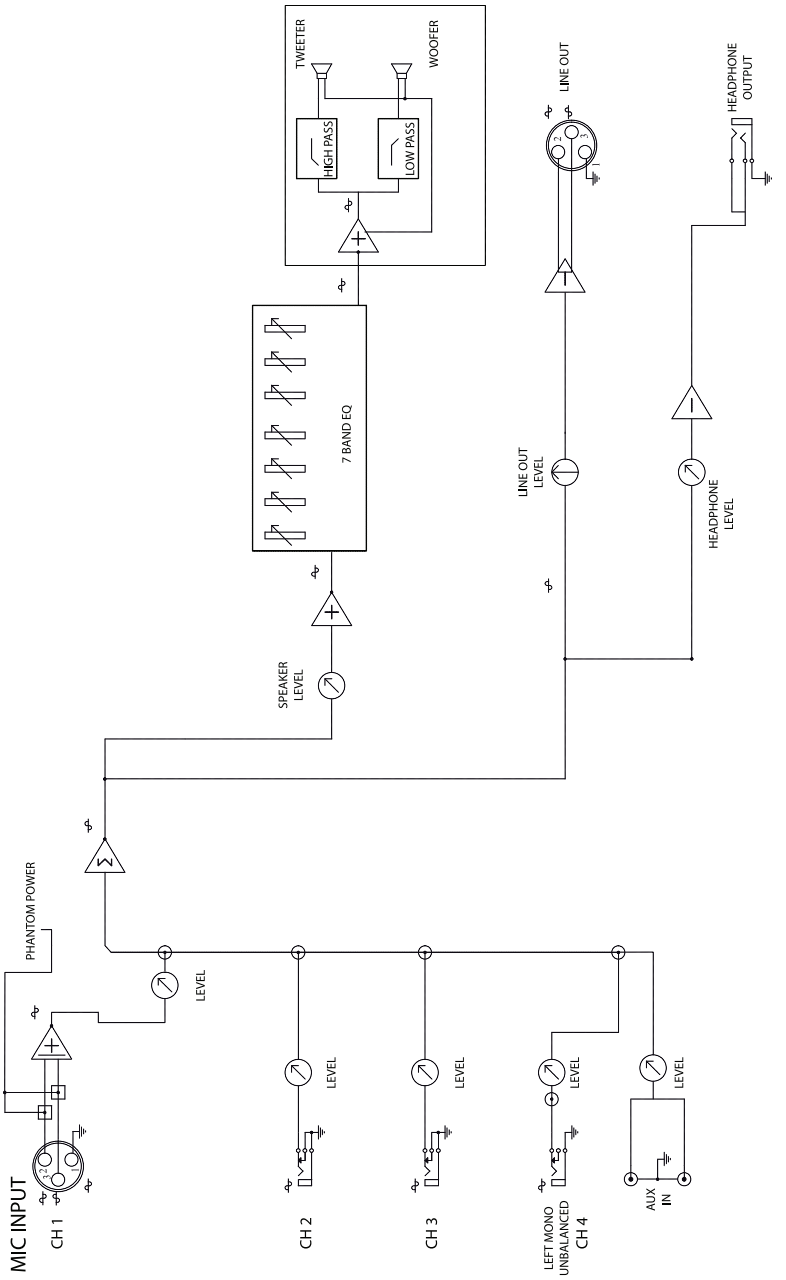
- To remove boxiness and make your instrument sound more "hi-fi," try attenuating mid-range frequencies while leaving low and high frequency settings flat, as shown in the illustration on the right.

- For a bright, cutting sound, try boosting the high and high mid-range frequencies, as shown in the illustration on the right.

- Whenever you get a really good EQ setting for a particular instrument or song, write it down (you'd be amazed how easy it is to forget these things!).

Finally, as you experiment with the EQ controls of the KM60 or Km100, don't forget that your keyboard probably provides EQ control, so experiment by using both.

KM60 and KM100 Block Diagram



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Notes

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